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EXAMINER

WEST, JEFFREY R

ART UNIT PAPER NUMBER

2857

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/682,030

Applicant(s)

STARK ET AL.

Examiner

Jeffrey R. West

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings in Figures 4 and 7 are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "258" and "268". A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "290" (page 11, line 4). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because in Figure 4 it is unclear what it means to "select fines". This step is not in accordance with the description of step "266" given in the specification (page 10, lines 32-33) which states, "the user selects 266 the desired filters". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

On page 7, line 32, the "client system" is labeled with reference number "56" while on page 7, line 23, "workstations" are labeled with reference number "56" and client systems, line 33, are labeled as "38, 40, and 42".

On page 10, line 21, "an flowchart" should be ---a flowchart---.

On page 10, line 27, the step of selecting a "specific option set" is incorrectly labeled "252" instead of "258" as it is labeled in Figure 4.

On page 11, line 12, a "Peach Bottom 1" plant is labeled with reference number "326" while the drawing in Figure 5 labels a "Peach Bottom 3" plant with reference number "326".

On page 12, line 19, "All" is incorrectly labeled "368" instead of "268" as it is labeled in Figure 7.

Appropriate correction is required.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-5, 8, 11-14, 17-22, 24, 25, and 27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 13, 21, 23, 26-28, 31-33, 37, 40, 41, and 63 of copending Application No. 09/634,434. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant invention does not specify that the "components" are internal components of a specific plant, that the information received is cross-referenced against the specific plant, and does not identify the same component and plant options.

The narrow limitation in the copending application of storing information relating to the "internal components of a specific plant" meets the broad limitation in the instant invention of storing information relating to the "components".

The narrow limitation in the copending application of "cross-referencing the information received against the specific plant" meets the broad limitation in the instant invention of "cross-referencing the information received". Further, it is considered inherent that there must be some type of processing component for the system of the copending application to carry out the cross-referencing function.

Also, the limitation in the copending application of storing received information, which is then cross-referenced, including "Baseline Inspection information, which includes recommended inspection criteria" meets the limitations in the instant

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invention of receiving, and cross-referencing, information "relevant to at least one of inspection regulations, inspection recommendations, and fleet experience with the components".

Finally, although the information received relating to the components and the plant types in the copending application are not exactly the same as that of the instant application, the limitation requires "at least one of" the listed components and plant types, therefore since the copending limitations and the instant limitations share at least "a shroud" and "Dresden 2 plant", the limitations of the instant invention are met by the limitations of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3-6, 11, 14, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,817,958 to Uchida et al. in view of U.S. Patent Application Publication No. 2001/0056335-A1 to Ikeda et al.

Uchida discloses an automatic plant monitoring and diagnosing method/system as well as a plant equipped with the system, wherein the plant is a boiling water or pressurized water nuclear reactor plant (column 1, lines 12-18), and the system further comprises a first input means for receiving detection data of plant operating conditions, apparatus operating conditions, such as jet pump (column 1, lines 50-51) and core spray (column 2, lines 16-18) conditions, and environmental conditions, a second input means for receiving plant inspection data, a first input data processing means for preparing data for use in plant monitoring and diagnosis based on the detection data from the first input means, a second input data processing means for preparing data for use in plant monitoring and diagnosis based on the inspection data from the second input means, and a plant chart (i.e. database) for storing the data prepared by the first and second input data processing means (i.e. cross-referencing the operating data and the inspection data) along with past/historical inspection data/results (column 3, lines 14-20 and 35-46) for use in the plant monitoring and diagnosis (column 4, lines 18-31).

Uchida also discloses that the operating conditions of each apparatus in the plant is detected by their respective detection means and is accumulated, and updated (column 6, lines 22-23), in the appropriate storage means continuously through an on-line monitor (column 6, lines 7-12) and that the collected apparatus data and inspection data are sent to a central control room where they are combined (column 7, lines 18-25) and displayed to allow a user to inquire about the condition of a particular apparatus or location wherein the automated system then calculates the

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residual life evaluation, for presentation to the user, along with the apparatus/member name, apparatus description, and the material name (column 16, lines 19-40, column 19, lines 9-18, and Figure 17A). Uchida also discloses inputting inspection data including material names as well as engineering conditions, such as the conditions of welds (column 13, lines 48-60).

Although Uchida does disclose sending data to a central location, Uchida does not teach the corresponding method or system for performing this function.

Ikeda teaches a remote monitoring diagnostics system and method for providing centralized remote monitoring of multiple power plants (0002) comprising collecting and storing, to a centralized database, operating plant data, the database also containing past plant data associated with errors having occurred to the plant and actions taken to cope with the errors, and analyzing the plant data according to the database in order to send a report to the user of the plant regarding the causes for, or action to cope with, the error in the plant (0006). Ikeda teaches that a field monitoring/client system collecting plant data from the controller of the power plant transmits the plant data, for downloading, to a remote monitoring center over a public phone line, or an Internet connection (0017), in response to a request for information (0020), and sending information, for downloading, from the remote monitoring center to the field monitoring/client system (0031). Ikeda also teaches that, upon the occurrence of an error and in response to a request to search the database for relevant error information (0064), the local field monitoring system retrieves the requested information and provides a report to be downloaded by the

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maintenance engineer wherein the report contains data indicating when the error occurred, the name of the plant where the error occurred, and the contents of the error (0024). Ikeda also teaches communicating and connecting, over a server, the remote monitoring center to the field monitoring/client center through a Firewall (0031 and 0035)

It would have been obvious to one having ordinary skill in the art to modify the invention of Uchida to include a corresponding method and system for sending data to a central location, as taught by Ikeda, because, as suggested by Ikeda, the combination would have provided a method for monitoring a plurality of plants from one location with clear results presented to skilled maintenance workers to significantly reduce the time and effort required to solve any pending problems (0003-0004) as well as prevented a third party from accessing the plant data (0035).

With respect to claim 5, although the invention of Uchida doesn't specify the type of nuclear reactor plant in which the invention is implemented, the Uchida reference implies that the invention would be applicable in any nuclear reactor plant such as one of the plurality of plants listed in the Energy Information Administration, "State-by-State list of U.S. Operating Nuclear Reactors", which includes Dresden 2 & 3, LaSalle 1 & 2, Quad Cities 1 & 2, Clinton, Peach Bottom 2 & 3, Limerick 1 & 2, and Oyster Creek plants.

Further, although the invention of Uchida and Ikeda doesn't specifically disclose configuring the server system to delete information or that the monitoring system include a program and associated code segments stored on a computer readable

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medium, it would have been obvious to one having ordinary skill in the art to include deleting information because the combination would have allowed further data management, allowed the user to correct mistakes by removing data incorrectly entered, and would have performed a step, taught by Uchida and Ikeda, functionally equivalent to continuously updating information. Also, it is considered inherent that in order for the monitoring device to perform the aforementioned computer-implemented method, the computers must contain a programmed code containing necessary associated code-segments.

9. Claims 2, 7-9, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. in view of Ikeda et al. and further in view of U.S. Patent No. 4,642,215 to Klinvex et al.

As noted above, the invention of Uchida and Ikeda teaches many of the features of the claimed invention including cross-referencing component data with inspection results and operation data for reactor welds, but does not teach a method for obtaining the weld data (i.e. ultrasonic testing) or specifically teach that the data correspond to inspection regulations or recommendations for the specific components (i.e. welds).

Klinvex teaches a universal tool for ultrasonic testing of nuclear reactor tubular objections such as vessels and their components parts, for locating various defects such as cracks and voids in the various weld volumes while being independent of

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the reactor vessel size and meeting government regulations mandated for such testing (column 3, lines 1-8).

It would have been obvious to one having ordinary skill in the art to modify the invention of Uchida and Ikeda to include a method for performing the weld inspection and specifying that the data correspond to inspection regulations or recommendations, as taught by Klinvex, because the combination would have provided the means necessary to test the reactor welds, taught by Uchida, and further, as suggested by Klinvex, by cross-referencing the component data against inspection regulations the combination would have provided a method for determining, not only whether the components meet inspection criteria set by the plant operator, but also whether the components meet the inspection regulations required by law (column 1, lines 39-57 and column 4, line 64 to column 5, line 9).

10. Claims 12, 13, 18-20, 22 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. in view of Ikeda et al. and further in view of U.S. Patent Application Publication No. 2002/0123864-A1 to Eryurek et al.

As noted above, the invention of Uchida and Ikeda teaches many of the features of the claimed invention including monitoring a plurality of plants from one central location, but does not specifically disclose a manner in which to present the information to the user.

Eryurek teaches remote analysis of process control plant data comprising monitoring component operation and transmitting the data over a bus, wireless

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communication system, or network connection running a XML protocol server (0053-0055) to a remote site that runs and oversees the operation of the power generating and distribution equipment (0050-0051) and produces a corresponding report to a user/client system using an Internet browser (0157) that allows the selection/entering of individual component and plant data through a corresponding display including user-friendly menus, such as pull-down menus (Figures 20, 27, and 37-41).

It would have been obvious to one having ordinary skill in the art to modify the invention of Uchida and Ikeda to include a specific manner in which to present the information to the user, as taught by Eryurek, because, as suggested by Eryurek, the combination would have provided a method for conveniently displaying results of diagnosis of many different aspects of plant operation to one location for easy monitoring and control by an operator and therefore eliminated the need for more physical user interaction (0006, 0010, and 0014).

Further, the applicant fails to provide the criticality of the claimed feature of submitting a request through pull-down lists. Therefore this aspect is considered an engineering design choice and, since the invention of Uchida and Ikeda teaches a functionally equivalent method for receiving inquiries, this feature is not considered patentable over the prior art.

11. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being

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unpatentable over Uchida et al. in view of Ikeda et al. and Eryurek et al. and further in view of U.S. Patent No. 4,642,215 to Klinvex et al.

As noted above, Uchida in combination with Ikeda and Eryurek teaches many of the features of the claimed invention including cross-referencing component data with inspection results and operation data for reactor welds, but does not teach a method for obtaining the weld data (i.e. ultrasonic testing) or specifically teach that the data correspond to inspection regulations or recommendations for the specific components (i.e. welds).

Klinvex teaches a universal tool for ultrasonic testing of nuclear reactor tubular objections such as vessels and their components parts, for locating various defects such as cracks and voids in the various weld volumes while being independent of the reactor vessel size and meeting government regulations mandated for such testing (column 3, lines 1-8).

It would have been obvious to one having ordinary skill in the art to modify the invention of Uchida, Ikeda, and Eryurek to include a method for performing the weld inspection and specifying that the data correspond to inspection regulations or recommendations, as taught by Klinvex, because the combination would have provided the means necessary to test the reactor welds, taught by Uchida, and further, as suggested by Klinvex, by cross-referencing the component data against inspection regulations the combination would have provided a method for determining, not only whether the components meet inspection criteria set by the

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plant operator, but also whether the components meet the inspection regulations required by law (column 1, lines 39-57 and column 4, line 64 to column 5, line 9).

12. Claims 10 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. in view of Ikeda et al. and Klinvex et al. and further in view of JP Patent No. 11-345019 to Uchida et al. (henceforth referred to as 'JP-Uchida')

As noted above, Uchida in combination with Ikeda and Klinvex teaches all the features of the claimed invention except for modifying or generating inspection requirements based on inspection results.

JP-Uchida teaches a maintenance supporting device for a plant comprising a data-hold section that holds obtained performance data about plant operation conditions and a repair data hold section that holds data about the repair conditions of the plant devices (0013), performed because of failing results discovered during inspection (0003), and an operating ratio created using the performance information which is used to create/modify the inspection schedule (0029). This information is then displayed to a user organized with respect to a reference number (i.e. indication), repair data with corresponding components, and the future inspection time interval in terms of a corresponding number of days (i.e. filtered with respect to criteria) (0017-0023 and 0030).

It would have been obvious to one having ordinary skill in the art to modify the invention of Uchida, Ikeda, and Klinvex to include modifying or generating inspection

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requirements based on inspection results, as taught by JP-Uchida, because, as suggested by JP-Uchida, the combination would have provided a method for determining a future (i.e. long term) maintenance schedule by taking into account the relationships between equipment which effects the needed inspection time of the components (0004-0009).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 5,856,931 to McCasland teaches a method and system for identifying, organizing, scheduling, executing, analyzing, and documenting detailed inspection activities for specific items in either a time-based or on-demand fashion.

U.S. Patent Application Publication No. 2001/0053940-A1 to Horn et al., and the assignee of the present application, teaches a method and system for assessing plant parameters and performance over a global network.

JP Patent No. 2002-023842 to Kawada teaches a World Wide Web plant monitoring system.

Energy Information Administration, "State-by-State list of U.S. Operating Nuclear Reactors" teaches the types of nuclear reactors located throughout the country.

14. Any inquiry concerning this communication or earlier communications from the

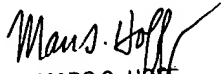
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examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jr
November 4, 2002


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800